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CYB 101

“Artifact for Integral Reflection.”

From this semester the Cybersecurity Fundamentals exam in CYB 101 was my most significant accomplishment because it shows my understanding and application of cybersecurity concepts. Starting the course with limited prior knowledge, the progress I made shows I can apply what I learned to justify my answers during the exam. Completing this course relieved some of the imposter syndrome I have been feeling as I advance in my computer science career. I now feel more confident as I approach the end of my degree that I am becoming more capable in my skillset.

This exam was a detailed application of cybersecurity principles. Each question compelled me to articulate my understanding of various cybersecurity threats and the strategies to mitigate them effectively. For instance, identifying the different motivations and methods between cyberterrorists and hacktivists required me to discern between cybersecurity principles and then to clearly justify the answer in my responses. Throughout the exam, I was challenged to think critically about the motivations behind various cybersecurity threats from insiders leaking sensitive information to state actors engaging in espionage. This involved a strategic analysis of potential vulnerabilities and the corresponding defensive maneuvers, which were shown in my responses. For instance, when discussing the principles used in social engineering attacks, I had to discern how attackers exploit human psychology to bypass security protocols effectively.

This assignment demonstrates the integration of multiple perspectives through the exploration of various types of cybersecurity threats and their countermeasures. It required an analysis of potential vulnerabilities and the corresponding defensive maneuvers, particularly the distinction between different threat actors such as insiders, cyberterrorists, and state actors. The application of this knowledge to real scenarios was a significant aspect of this exam. Each response involved applying cybersecurity concepts to specific examples, such as the effectiveness of long passwords due to their complexity against brute-force attacks, and the strategic use of defensive layers to protect against attackers.

My responses on the exam were grounded in cybersecurity theory and driven by practical implications. For example, the rationale behind long passwords being stronger than short ones involved an understanding of how they reduce the feasibility of brute-force attacks which is an application of basic cryptographic principles. Another example was explaining the use of layers in defense strategies to show my ability to apply complex concepts in a practical manner.

To conclude, the Cybersecurity Fundamentals exam was my favorite assignment of the semester because it proves my knowledge increased from novice to proficient. It tested my ability to critically analyze and apply knowledge in practical scenarios, preparing me for future challenges in the field. The insights gained have not only enriched my understanding of effective cybersecurity practices but also solidified my foundational skills in anticipating and stopping cybersecurity threats. This reflection serves as a testament to my educational progression in the class and emphasizes how theoretical knowledge can be paired with practical application to meet the complex and dynamic demands of the field. I am confident that my experience with this course has prepared me well for my future career.